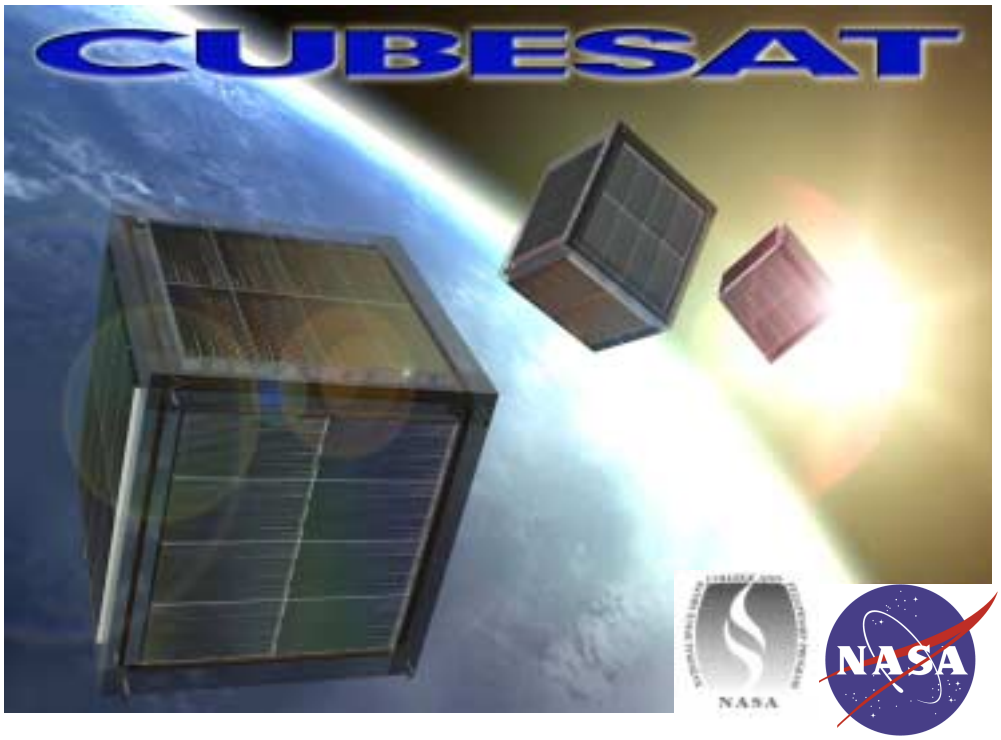
NASA National University Satellite Programs Workshop Announcement

April 4-5th, 2002
NASA's Jet Propulsion Laboratory
California Institute of Technology



JPL

Welcome

You are cordially invited to participate in the upcoming NASA National University Satellite Program Workshop, to be held at the NASA Jet Propulsion Laboratory, California Institute of Technology, on April 4-5th, 2002.

Objectives of Workshop

The workshop will bring together invited participants from university, government, national laboratories, and industry to explore innovative ways in which the design, development, and flight of highly miniaturized satellites (referred to as Micro-Sats, Nano-Sats, and Pico-Sats), can be used effectively for the following purposes:

- Education and development of a future space engineering workforce,
- Space exploration education and outreach,
- Bring flight experience to a space technology development community,
- Provide frequent opportunities for the test and demonstration of space technologies, and
- Perform focused space and earth science exploration missions.

General Information

The workshop will take place at NASA's Jet Propulsion Laboratory, California Institute of Technology, located at 4800 Oak Grove Drive, Pasadena, CA 91109. Local area maps, including a map of JPL, can be found at the workshop website: http://cism.jpl.nasa.gov (from the main menu, select 'events' and then 'workshops'). The web site will request a username and password for entry, please use: *Username*: workshop, *Password*: CubeSAT (it is case sensitive).

Meeting Room Location

The workshop location is in the JPL von Karman Auditorium for both days of the workshop.

Registration

All attendees of the workshop must enter their registration request by *Wednesday, March 11, 2002*. Please check the workshop website/Registration Form for information on what is required for on-lab check-in (especially for non-US citizens). If you require additional assistance please contact Ms. Debbi Llata at (818) 354 3309, debbi.llata@jpl.nasa.gov.

Technical Program Contacts:

Leon Alkalai, JPL
Michael J. Drake, The University of Arizona
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Thomas George, JPL
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Nilton O. Renno, The University of Arizona
Ernest Robinson, The Aerospace Corporation
Bob Twiggs, Stanford University
Julius Dasch, NASA HQ

Sponsored by:

The *NASA National University Satellite Programs Workshop* is sponsored by the NASA Space Grant Program, the JPL Center for Integrated Space Microsystems (CISM), the Air Force Research Labs (AFRL), DARPA, and the Arizona Space Grant Consortium.

Tentative Agenda, April 4th 2002, Von Karman Auditorium

8:00 – 8:30 am **Registration and Refreshments**

8:30 **Welcome**, Firouz Naderi/Fuk Li, JPL

Workshop Objectives, Leon Alkalai, JPL

NASA/DOD University Satellite Programs

Opportunities for Student-Built Probes in Space Exploration, Orlando Figueroa, NASA HQ

Students, Satellites and the Nation's Space Program, Michael J. Drake, The U of A

National Space Grant Student Satellite and NASA EPSCoR Programs, Diane De Troye, Julius Dasch, NASA HQ-FE

National Space Grant Student Satellite Program, W. Hiscock, MSU, N. Renno UA

Air Force - University NanoSat Program, Jeff Ganley, Air Force Research Labs

Micro Systems and PicoSats, Bill Tang, DARPA/MTO

PicoSats for Space Test & Operational Architectures, E. Robinson, Aerospace & Thomas George, JPL

12:00 pm **Lunch Break – 167 Cafeteria**

Education and Workforce of the Future

1:00 pm **Workforce development and university-government partnerships**, J. Rademacher, C. Lewicki, JPL

Picosatellites and the TRW/University Alliances & Development Program, Ray Haynes, TRW

Innovation in Space, Bob Twiggs, Stanford University

The CubeSat Program, Jordi Puig-Suari, CalPoly

California NASA Space Grant Consortium, Michael Wiskerchen, UCSD – CA NASA Space Grant Consortium

California Launch Vehicle Education Initiative (CALVEIN), Eric Besnard, Cal State Long Beach

3:00 pm **Break**

Small Satellite Launch Opportunities of the Future

DOD/Air Force Space Test Program, Col. Perry Ballard, SMC/TE

NASA University Class Missions: UNEX, David Pierce, NASA GSFC, UNEX Mission Manager

"RASCAL: Rapid Access, Small Cargo, Affordable Launch," Preston H. Carter II, DARPA/TTO

Space Shuttle "Tunnel to Space, Ernest Y. Robinson, The Aerospace Corporation

Small Payload Launch Opportunities, Tom Svitek and Jeff Zerr, CubeSat Launch Company

New Millennium Program Small Payload Technology Validation Carrier, Linda Herrell, NMP, JPL

5: 00 **1st Round Table Discussion: What can NASA/DOD do for the University Satellite Community?**
Michael Drake, Leon Alkalai, NASA, DARPA, AF.

6:00 pm **Social Event - Hors D'oeuvres at the JPL Von Karman Auditorium**

Tentative Agenda, April 5th 2002, Von Karman Auditorium

7:30 - 8:00 **Refreshments**

Current University Satellite Projects

8:00 am **MEROPE**, David Klumpar & students, Montana State University

Rincon Sat, Uwe Fink & students, The University of Arizona

Citizen Explorer, BalloonSats: Elaine Hansen, University of Colorado at Boulder

ICARUS Satellite Mission, B.T Cesul, B. Gilchrist, University of Michigan

Stanford MicroSats, B. Twiggs, Stanford University

ION: Illinois Observing Nanosatellite, Gary Swenson, Ryan Kuester, University of Illinois Champaign Urbana

ASUSat Lab - Three Corner Sat, ASUSat1, and others: Michael Schoenoff and Helen Reed, ASU

SPHERES, Steve Sell, Payload Systems Inc.

10:00 break

10:15 **2nd Roundtable Discussion: Charles Wetsel (Mars Program), Jim Cutts (Solar System Exploration)**
"Future Space Exploration Capabilities enabled by Highly Miniaturized Space Systems"

12:00 Lunch

Future Space Science Small Satellite Projects

1:00 pm **University Nanosats for formation flying demonstration**, Jesse Leitner, NASA GSFC

Potential Science Missions Utilizing Microwave Beacon Microsatellites, Robert Kursinski, JPL and UA

Stereo Imaging with Picosatellites, Roger Davies, JPL

Reconfigurable Pico Satellites, Michael Parker, Rincon Research

FEGI: Field Emitting Get Away Special Investigation, H. Goldberg, B. Gilchrist, University of Michigan

Science Closure and Enabling Technologies for Constellation Class Missions, V. Angelopoulos, Space Sciences Laboratory, UC Berkeley

Traveler I: Sub-Orbital Flight Demonstration of MEMS Technologies for Space Applications, Andrew Ketsdever, USC

Examples of Missions using CubeSats, Siegfried Janson, Aerospace Corporation.

SPHINX: Space Hardening Inflatable Structures Experiment, Ryan Connelly, UCSB

3:00 pm **Workshop Summary**

4:30 pm-6:00 pm **Optional Mars Yard and Mars Exploration Rovers (MER) Tour**